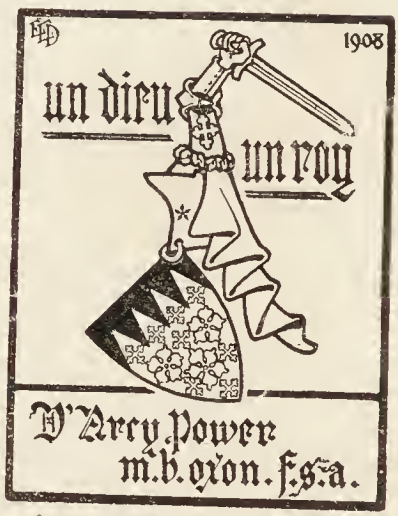
CLIO MEDICA

MEDICINE IN THE BRITISH ISLES

SIR D'ARCY POWER



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CLIO MEDICA

A SERIES OF PRIMERS ON THE HISTORY OF MEDICINE

EDITOR: E. B. KRUMBHAAR, M.D.

II

MEDICINE IN THE BRITISH ISLES

BY

SIR D'ARCY POWER
K.B.E., F.R.C.S. Eng.

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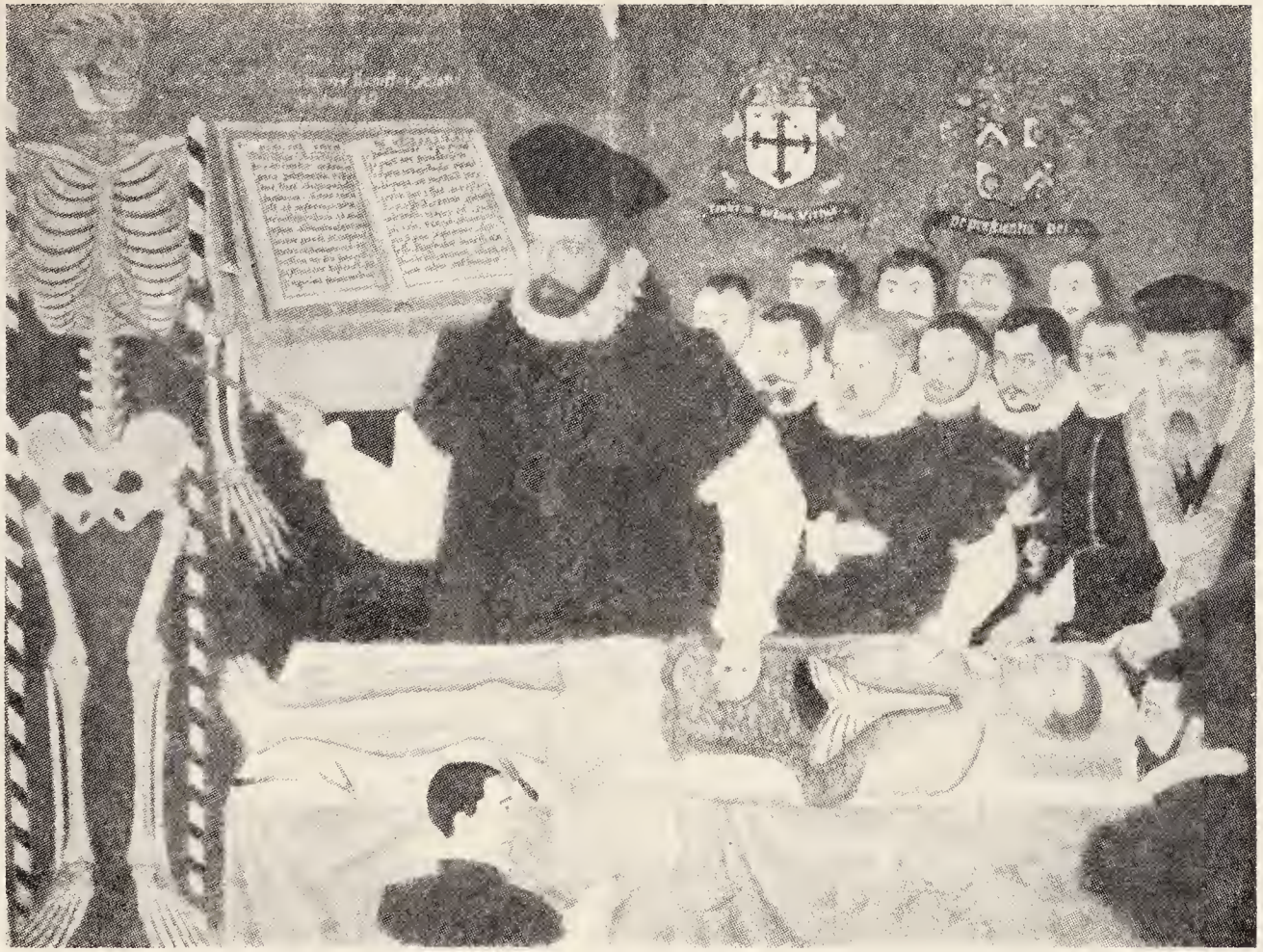

Frontispiece

John Banister (1533–1610) delivering the visceral lecture at the Barber Surgeon's Hall London, in 1581. (From a contemporary painting now in the Hunterian Library at Glasgow.)

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MEDICINE IN THE BRITISH ISLES

BY

SIR D'ARCY POWER, K.B.E., F.R.C.S. ENG.

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EDITOR'S PREFACE

This little volume is one of a series of handbooks which under the general title of "Clio Medica" aims at presenting in a concise and readable form a number of special phases of the long and complex history that underlies the great edifice of modern medical science.

Since the times of the Aldines and Elzevirs, small easily portable booklets have been popular with the intelligent reader. Today books that add no appreciable burden to the coat pocket are real helps to the busy worker or student in gaining ready access to considerable worth-while reading. Such booklets, too, seem peculiarly appropriate for a new line of approach to such a subject as the History of Medicine from a different point of view than has hitherto maintained. From the very nature of this subject, when treated in a general way, it has thus far appeared either in ponderous tomes or, if in smaller volumes, in such scanty garb that almost no details of the costume are discernible. Then, too, the strictly chronological method of approach, with emphasis on prominent individuals, becomes almost a necessary form of treatment in the comprehensive general histories. The searcher for knowledge of the history of some small branch of the subject—a specialty, say, or the progress of medicine in this or that country—is thus forced to hunt, often painfully with help of index and marker, through the pages of the larger book or books, to be rewarded with a necessarily disconnected and usually incomplete presentation.

Our hope is that the series "Clio Medica" will obviate these difficulties. Conveniently small and inexpensive, yet prepared by recognized authorities in their chosen field, each volume will aim to present the story of some individualized phase of the history of medicine in such compact, connected, convincing and reasonably complete form that the medical undergraduate, the specialist, the busy general practitioner and the "intelligent layman" will all be attracted to a few hours' reading, which in many cases will doubtless prove the introduction of an awakened interest to a more comprehensive study.

An increasing interest has recently become manifest in the history of medicine in the English speaking as well as in other countries, as is shown by the successful formation of new societies, journals and institutes for the study of the subject. The times, then, seem auspicious for this venture. Several volumes of the series are already in course of preparation; as these materialize more will be undertaken with the possibility of a large number being attained. We bespeak the support of our colleagues and friends and pray that the Goddess whose name we have used to designate our series may deign to foster the undertaking!

E. B. KRUMBHAAR.

PHILADELPHIA, PA.

PREFACE

I have endeavoured in the following pages to give the History of Medicine in the British Isles in only the barest outline. I have, however, added a bibliography by which any reader who becomes interested in the subject can pursue the history in greater detail and the more he does so the more interested he will become. The British Isles cover only a small amount of territory and the towns are comparatively few. London, Edinburgh and Dublin have always been predominant. They have contained powerful medical corporations from very early times and have always exercised an influence for good upon medical education and medical practice because their ethical standard has nearly always been high. The history of medicine, therefore, in this country is mainly a history of its corporate bodies.

D'Arcy Power.

London, England
April, 1930.

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CLIO MEDICA

MEDICINE IN THE BRITISH ISLES

CHAPTER I

EARLY CONDITIONS

There is practically no knowledge about the practice of medicine in the British Isles until some years after the Norman Conquest of England. Saxon medicine, so far as we know, consisted of charms or spells with potions and local applications made from garden herbs or from plants growing by the wayside. Many of these remedies still linger among us in the shops of herbalists and are in common use among the people for such virtues as they possess. No one in Saxon times seems to have devoted himself entirely to medicine as a profession; though there were leeches, as the doctors were called, and in every village and district there were persons thought to have a special power, god-given or by inheritance, to cure disease. The belief still lingers in the popular idea that the seventh son of a seventh son is peculiarly fitted to be a doctor.

The earliest records in Scotland and Ireland show that medicine was an hereditary occupation.

The physician was attached to the person of the chief of the clan or the king of the sept, by whom he was often held in high esteem, and a regular scale of fees was sometimes laid down for him. There is no doubt that when son succeeded father for several generations a special skill was acquired more especially in the treatment of the wounds and injuries occurring in civil life as well as in warfare.

A drawback to the practice of medicine at this period and for many years afterwards lay in the fact that for failure to redeem their promise to cure the surgeon often and the physician sometimes were fined, or killed if the patient died under his hands. The earlier textbooks, therefore, recommend unanimously that curable cases alone should be treated. When death seemed imminent or there was danger of permanent injury other practitioners were to be called into consultation to share the responsibility. Bolder surgeons or those who were trying new methods became peripatetic, a trace of this period perhaps still survives in this country in the custom of paying the surgeon his fee directly after the operation has been performed.

Medicine became a profession after the Norman Conquest, though there does not seem to have been any systematic teaching until the first quarter of the fifteenth century (1423). The Norman kings and nobles brought in their retinues highly educated ecclesiastics, some of whom had been trained in medicine in the schools of Italy and France, while in most of the great monasteries like Evesham, St. Alban's and Bury St. Edmunds some of the inmates were

specially devoted to medicine. The English universities, too, gave degrees in physic and required evidence that the candidate had *cured*, we should now say had *treated*, a certain number of poor persons. Medicine, therefore, was almost entirely in the hands of the Church although there were undoubtedly a few lay physicians in such large towns as London. Surgery, on the other hand, was wholly carried on by laymen, of whom there were two classes: the one, surgeons proper, or as they would now be called consulting surgeons; the other, members of the Barbers Company, the general practitioners who attended the minor ailments and injuries of the citizens and their families.

Little is known about the physicians. They lived in their convents or at court, treating the poor as out-patients and the rich when they were called upon to do so. For the most part medicine was subordinate to their clerical duties. Much more is known of the surgeons for they had to gain their livelihood in the open market and were exposed to all the dangers and inconveniencies of present-day practice. The consulting surgeons existed only in London where they formed a small corporate body known as "The Fellowship of Surgeons." Their numbers varied from time to time, sometimes being as few as six, sometimes as many as seventeen. They co-opted each other, did not teach and took no apprentices. They had learnt their business on the battlefield. When war was declared they trooped out of England, taking with them assistants, and attached themselves to this or that leader. Nominally they received a retaining fee and an allow-

ance; in reality they were paid by free gifts, frequently in kind, such as a jewel, a gold chain, a butt of wine, most often perhaps by the ransom of a prisoner or by loot. In war time they flourished but during a truce or when peace came they returned home and either starved, lived on their wits or spent their time in quarreling with the civil practitioners. Fortunately for them wars were numerous and prolonged, so that on the whole they did not do so badly.

It was far otherwise with the Guild of Barbers. They stayed at home, minded their business, married, took apprentices and throve. Starting as a religious guild, they soon became a close corporation to which admission could be obtained by patrimony, by apprenticeship or by redemption. The son of a member of the Guild became a member in due course on payment of a small fee: the apprentice of a member became free of the Guild if his master recommended him at the end of seven years' servitude; the stranger, if properly vouched for or if he were recommended by some influential person, could be admitted on payment of a substantial sum of money or the promise of favors to come.

In process of time the Guild became wealthy, obtained the ear of the ruling body in the city and of the king in council. A charter was granted in 1462, the religious element disappeared to a large extent and the Guild became a Company with exclusive rights and privileges.

Although this body was known as the Barbers Company it seems always to have been subdivided internally into two classes, the one keeping open shop as barbers who did such minor surgery as

bleeding and perhaps tooth-drawing, the other acting as surgeons and treating to the best of their ability the diseases resulting from plague, pestilence and famine, which were of no infrequent occurrence.

As a corporate body the Company did much good. They insisted that the apprentices should be taught the rudiments of their work; that quarrels between their members should be adjusted without recourse to the law courts, that irregular practitioners and notorious quacks should be proceeded against and that individual practitioners should do their best for their patients. Unfortunately the authority of the Guild and afterwards of the Company only extended to the city of London and seven miles round and beyond this radius anyone was allowed to do what seemed good in his own eyes. The Bishop of London too had independent power to license medical practitioners, but on the whole the system worked fairly well in spite of domestic bickering and constant quarrels with the fraternity of surgeons and with the other civic bodies. The Company had considerable disciplinary powers. They could and did whip erring apprentices pretty frequently and they fined and imprisoned recalcitrant members at a time when jail fever was rife and the consequent risk of death considerable.

Medicine and surgery long remained separate branches of knowledge, so that he who was expert in physic might be wholly ignorant of surgery, which indeed he affected to despise as a mere handicraft. The wiser men in each branch saw the evil of such a divorce and as early as 1423

an attempt was made to establish a joint College of Medicine and Surgery by the union of a body of university graduates with the Fellowship of Surgeons. In this college there were to be teachers both of medicine and surgery. The scheme looked excellent on paper, but war broke out again on the Continent, the surgeons hurried away and it is doubtful whether the College came into actual existence, at any rate very little more was heard of it.

CHAPTER II

THE MEDICAL CORPORATIONS

Throughout the fifteenth century the physicians remained unincorporated, each fighting for his own hand; the surgeons were banded together into a Fellowship few in number and limited in authority; the Barbers and the civil surgeons who practised in London and within seven miles were a numerous and powerful body in possession of charters from the king and the ear of the mayor and corporation. They were, moreover, wealthy. The country was so distracted during the Wars of the Roses that everything had to go on as it had done for centuries. Who could think of making radical changes when a night watch of 5000 men was prowling through the city all night, when battles were frequent and no one knew who was king. Quieter times came when Henry VII reigned and the masterful presence of King Henry VIII ensured tranquillity.

College of Physicians. The physicians were the first to take advantage of the new order and in 1518 they obtained a charter creating a College of Physicians in London. The charter conferred upon the College powers similar to those which had already been granted to the Barbers Company. It gave authority to examine, fine and imprison its Fellows; to appoint officers and to examine medicines and drugs exposed for sale. The Fellows were exempted from the arduous duties of serving on juries or on the city watch. Like the Barbers Company its powers did not

extend beyond the city and a circuit of seven miles and the medical graduates of Oxford and Cambridge were exempt from its jurisdiction. The College of Physicians has obtained increased authority in course of years and has maintained the best traditions of English medicine as a learned profession. It now contains three classes: Licentiates, who form the bulk of the medical men qualified in England; Members, who pass a somewhat harder examination and intend to devote themselves especially to medicine, and Fellows, who are elected from the more meritorious of the distinguished Members.

THE BARBER SURGEONS COMPANY. The general body of the medical profession in London had a hard struggle for existence during the first half of the sixteenth century, because Parliament showed a marked inclination to allow anyone, male or female, to practice without let or hindrance. Fortunately a generation of level-headed men appeared during, and perhaps in consequence of, the movement which led to the Reformation in Religion. The Barbers Company and the Fellowship of Surgeons agreed to sink their differences and in 1540 an Act of Parliament was passed incorporating the two bodies into a single company called The United Company of Barbers and of Surgeons. The union was in many ways beneficial. It carried on the old disciplinary powers, it ensured a certain minimum of knowledge and by it the medical profession was governed until 1745 when The United Company was dissolved.

THE SURGEONS COMPANY. From 1745 onwards the Barbers remained as barbers and did not meddle in surgery. The surgeons were formed

into a new company which undertook the teaching of surgery, but managed its business badly, fell into disrepute and the company was dissolved in 1796.

The College of Surgeons. Four years later the College of Surgeons was founded by charter and remains today as The Royal College of Surgeons in Lincoln's Inn Fields, with the power of granting diplomas to Members, and, to those who have passed a more difficult examination, diplomas as Fellows. The College is also charged with the duty of maintaining the great collection of preparations to illustrate Life in all its forms which represents the work of John Hunter, the founder of Scientific Surgery in England.

The Society of Apothecaries. The numerous ingredients in the medicines used during medieval times made the apothecary indispensable. It was beneath the dignity of the physician to compound the medicines and the surgeon had neither the time nor the ability. The apothecary, at any rate in London, was a recognized tradesman and was a member of the powerful Grocers' Company. In 1606 he cast off his allegiance and obtained a charter of incorporation from King James I, although it was not until 1617 that a further charter converted the incorporated body into "The Society of Apothecaries." The charter empowered the Master and Wardens of the society to enter any shop where the mystery and art of the apothecary were exercised, to examine all persons professing the art as to their knowledge and skill, to examine their drugs and burn all they deemed corrupt or unwholesome before the offenders' doors. The members of the

society were also given authority to take apprentices who had to serve for eight years, know the rudiments of Latin and pass an examination in deciphering the prescriptions written by physicians, in field botany and in the preparation of medicines.

In process of time the apothecaries encroached so greatly upon the province of the physicians that fierce quarrels arose between the two bodies, known as the battle of the Dispensaries. The apothecaries won in 1721 when the House of Lords decided that they had a right to practise medicine and were entitled to prescribe for a patient as well as to prepare medicine for his treatment. Although this judgment put the apothecary into a better position, it gave him no power to charge for his visits. It therefore became usual for him to send in an account for the medicines he had prescribed and to leave a blank space for attendance, trusting to the generosity of the patient for his remuneration. The method was unsatisfactory to both parties, but it was not until 1811 that Chief Justice Sir James Mansfield decided that an apothecary was entitled to suitable remuneration for his personal attendance. The legal proceedings which led to this result was a friendly action brought by John Fuller, an apothecary, against the executors of William Douglas, the fourth Duke of Queensbury familiarly known as "Old Q.," for a sum of £12,000. The evidence showed that between 1803 and 1810 Fuller had made 9259 visits and had slept in the Duke's House on 1215 occasions, His patient always refused to pay, saying that his executors might settle the bill, and there was plenty of

money with which to do it for he was leaving over a million pounds, that he was on perfectly good terms with his doctor but he could not be bothered to pay. After the death of the Duke the executors thought it would be wise to obtain judicial sanction before paying away so large a sum as £12,000, which they themselves considered fair and the jury after a strong summing up by the Chief Justice in favor of the Apothecary awarded him £7500 in full settlement.

The incorporation of the profession in Scotland ran very much on the same lines as in England, though it took place a few years earlier owing to the personal interest which King James IV of Scotland (1473–1512) took in medicine and surgery. He treated wounds, drew teeth, couched for cataract and was not above accepting a fee for his services, though occasionally when the operation failed he would recompense the patient. The surgeons united with the barbers of Edinburgh in 1505 to form a single guild. In addition to the privileges which were afterwards granted to The United Company of Barbers and Surgeons in London, the Scottish Guild was granted the sole right to manufacture and sell aqua vitae. In 1505, too, a Faculty of Medicine was created at Aberdeen, when King's College was founded, and in 1599 the Faculty of Physicians and Surgeons was established in Glasgow. The Guild of Surgeons was converted into The Royal College of Surgeons in 1778. The physicians of Edinburgh after several abortive attempts succeeded in obtaining a charter to found a Royal College in 1670. The apothecaries if they existed at all were negligible, for the members of the Guild

of Surgeons and Barbers monopolized their duties. The universities in Scotland always took a more active part in the education of medical students than did the Universities of Oxford and Cambridge in England. The Scottish universities therefore obtained a long line of distinguished teachers as professors, whose fame spread throughout the world and so attracted students, especially from the United States, that it became the custom of every well-to-do father to send his son to Edinburgh for a postgraduate course if he showed any signs of ability and was being trained for medicine.

In Ireland incorporation of the medical profession followed on very much the same lines as in England and Scotland. A Guild of Barbers was founded in 1446, which admitted women and made no distinction between barbers and surgeons. In 1784 the surgeons formed the Royal College of Surgeons of Ireland but the old Guild was not dissolved until 1840. It seems never to have exercised much authority, took no part in teaching and admitted members who were quite illiterate. A guild of physicians was in existence from 1654–1667 and in 1692 a charter was granted by William and Mary to the King's and Queen's College of Physicians with exclusive power to license practitioners in Dublin, even to the exclusion of graduates of Trinity College, Dublin. It was also given power over the apothecaries. These powers were well used, for anatomy was taught, candidates for the membership were examined and a higher standard of general education was insisted upon. The apothecaries were banded together as the Guild of St. Luke

in 1745 and afterwards became the "Apothecaries Hall of Ireland" with authority to examine its members and license them to practice. Trinity College, Dublin, was founded in 1591 but did not build its first anatomical rooms until 1711 and from that time on gained a gradually increasing reputation owing to the vigor and originality of its great teachers in medicine and surgery.

CHAPTER III

THE HOSPITALS

The hospital system began and for many years continued as a pure charity under the ægis of the Church. The oldest hospitals, like those of St. Bartholomew and St. Thomas in London and St. Bartholomew's in Rochester, Kent, were founded by individuals who obtained charters and grants from the kings and special privileges from the popes, as head of the church universal. But from the beginning they took two lines, the one, included those founded for infirm persons and for lepers and were somewhat of the nature of infirmaries; the other, like our modern hospitals, was established for those who were acutely ill, suffering from what would now be called surgical diseases, for women in childbed and for those who fell by the way while on pilgrimage. The hospitals for chronic cases, the leper hospitals and the pilgrimage hospitals, gradually fell into decay; the hospitals for acute cases increased in size and in usefulness, but in England they existed only in the City of London.

Hospitals for the acutely ill were associated with but were not dominated by ecclesiastical authority. They were served by brethren and nursed by sisters of some professed order, often Augustins, but the head of the hospital might be and frequently was a layman. The religious element, in accordance with the sentiment of the time, was predominant and is well exemplified in the words of the early chronicler who tells how

St. Bartholomew's Hospital was founded in 1123 by Rahere. The story runs:

Rahere, a courtier though a cleric, decreed himself to go to Rome to do the worthy fruits of penance and, our Lord God directing his pace, came whole and sound whither he proposed, where at the martyrdoms of the blessed Apostles Peter and Paul, he, weeping his deeds and calling to mind the escapades of his youth and ignorance, prayed to our Lord for the remission of them, promising furthermore none like to do, but these utterly to forsake, promising ever devoutly to obey His will. And when he would perfect his way that he had begun he saw a vision full of dread and sweetness. It seemed to him that he was borne up on high of a certain beast which set him in an high place and, when he from so great a height would inflect and bow down his eyes, he beheld an horrible pit and the deepness of the same pit was deeper than any man might attain to see. Therefore he, knowing his secret faults deemed himself about to slide into that cruel downcast and he for dread trembled and great cries proceeded out of his mouth. To whom dreading and for dread crying appeared a certain man like in shape the majesty of a King, of great beauty and Imperial authority. Then said he, "I am Bartholomew the Apostle of Jesus Christ that came to succour thee in thine anguish and to open to thee the secret mysteries of heaven. Know me truly by the commandment of the High Trinity and the common favour of the celestial court to have chosen a place in the suburbs of London at Smithfield where in my name thou shalt found a Church and it shall be to the honour of God; there shall be the tabernacle of the Lamb, the Temple of the Holy Ghost. This spiritual house the Almighty God shall inhabit and hallow it and glorify it and His eyes shall be open. His ears listen on this house night and day that the asker in it shall receive and the seeker shall find and the ringer and knocker shall enter. Wherefore do thou boldly; neither of the costs of the building doubt thee not; only give thy diligence and my part shall be to find the necessaries. Direct, build and end this work. And therefore of this work know me the master and thyself only the minister. Use diligently thy service and I shall show my lordship." In these words the vision vanished.

Rahere went home and built the Church and the Hospital close to each other in Smithfield, as he had been enjoined. Both remain to this day, the church a vision of beauty; the hospital known throughout the world as a place of healing.

In this and other hospitals of the time provision was always made for the daily celebration of mass in sight of all the patients. The accommodation was of the simplest: The patient lay on the floor covered with a rug; his victuals were begged from charitable persons in the neighborhood and he had the right of burial in the hospital graveyard free of expense. In later days money came in as voluntary gifts from various sources. A sister or brother who had spent their lives in its service bequeathed to the hospital the money or the land they had inherited from their prosperous city relatives, or a citizen in token of humility would desire to be buried in the graveyard, a privilege which could be granted upon payment of a special fee. The money thus obtained was spent in enlarging the buildings and accommodating more patients. The buildings at no time were elaborate. The central hall remained but the annexes were mere wooden buildings of one story covered with thatch. And so they remained for four hundred years when the rapacity of Henry VIII seized the revenues and reduced the good work to a minimum.

During this long period the patients were drawn from several sources. As the reputation of the hospital spread, many came from long distances to be cured. It would appear that they often spent a night in the neighboring Church, partly perhaps for rest, partly to be under observation and

partly to be cured "by suggestion," as it would now be called. At St. Bartholomew's Hospital the great plain of Smithfield was at the very gates. Here were held all the public spectacles of the city, sometimes a three-day tournament at which the king and queen with the court would be present; at another time, as in the case of Wallace the Scottish patriot, the execution with all its attendant horrors of one who had been adjudged a traitor; and some years later there were the burnings of heretics. The citizens loved a spectacle. They crowded in their thousands and the crushed, trampled on and assaulted must have kept the hospital busy. For every day patients there were the ordinary accidents of city life, fractures, dislocations, persons run over in the narrow streets, falls from windows and ladders, just as there are today. The hospital gate was always open, no questions were asked and no money was demanded. Too often there were days when the brethren and sisters in charge must have felt overworked, for on a cry of "clubs, clubs" every apprentice, and there were thousands of them, would rush out armed with a cudgel to have a free fight among themselves or better still with the young lawyers, who lived within the walled precincts of the Temple and Inns of Court. For four hundred years the two hospitals dedicated to St. Bartholomew and St. Thomas must have found plenty to do, but it was done in a loving and kindly spirit for the teaching was that the wounded or injured patient represented Christ crucified.

The Reformation made great changes in the London hospitals. They had been religious founda-

tions for four hundred years; they now became secularized. Their revenues having been confiscated they would soon have fallen into decay, but at St. Bartholomew's Hospital, of which the history is known almost from day to day, the Citizens of London (as represented by the Lord Mayor and Corporation) determined that the hospital should be maintained. An attempt was made to continue it on a religious basis modified to suit the altered times. The result was a failure and the citizens then reorganized the whole system, placed it on a firm financial basis and made it entirely secular. They carried out similar changes at Christ's Hospital, which became an educational institution for boys, known throughout the world as "The Blue Coat School"; at Bridewell, which was made a reformatory for fallen women and at Bethlehem for lunatics. The king was pleased to take credit for the changes and St. Bartholomew's, St. Thomas', Bridewell, Bethlehem and Christ's Hospitals are still known as "The Royal Hospitals" and have retained their peculiar constitutions and methods of government dating from the middle of the sixteenth century. The medical and surgical staff were in all cases laymen; the nurses retain to this day something of their original religious character for they are called "Sisters"; they wear a blue uniform, they are appointed to a ward, cease to be called by their family names and are known as "Sister Mary," "Sister Harley" or Sister Abernethy" as the case may be, and they hold office for life. These at any rate were the conditions before the European War, though they are now greatly altered.

Matters remained almost stationary in the hospital world until the first quarter of the eighteenth century, when a great wave of philanthropy swept over the country. New hospitals like The Westminster (1720), Guy's (1725), St. George's (1733), The London (1740) and The Middlesex (1745) were established in London.

The movement was not limited to England. Six hospitals were opened in Scotland during this period. The Edinburgh Royal Infirmary (1729), Aberdeen (1739), Dumfries (1775), Montrose 1780), Glasgow (1794) and Dundee (1795). The Jervis Street and Mercer's Hospitals in Dublin came into existence in 1728 and 1734 respectively; Dr. Steevens' Hospital in the same city in 1733, the North Infirmary at Cork as early as 1721 and the Barrington Hospital at Limerick as late as 1836. This last hospital was remarkable because it was financed for a short time in its early days from funds derived from municipal pawnbroking.

During the 125 years subsequent to 1700 no less than 154 hospitals and dispensaries were founded in the British Isles and of these 74 were built in the Provinces. Among the early ones to be founded outside of London were the York Hospital (1710), Salisbury (1716), Cambridge (1719), Bristol (1735), Royal Hants (1736), Windsor (1736), Northampton (1743), Exeter (1745) and one of the latest the Wakefield Infirmary in 1787. Of the 153 hospitals and dispensaries founded between 1700 and 1825 ten general hospitals and ten dispensaries were in London. The English counties provided 79 hospitals, Wales two hospitals and one dispensary, Scotland

ten hospitals and five dispensaries, Ireland 46 hospitals. Of those founded in the English counties ten were opened before 1750, twenty-five between 1750 and 1800, thirty-four between 1800 and 1825.

These infirmaries, like the hospitals, admitted patients suffering from every kind of disease, infectious and non-infectious alike, and except for separation of the sexes no attempt was made at segregation.

It was not until late in the eighteenth century that lying-in hospitals were founded nor until the beginning of the last century that special hospitals were provided at first for the treatment of diseases of the eye, then of the chest, afterwards of the nose and throat, ears, deformities, nervous diseases, children and still more recently of cancer and of the heart.

The increase of population and the improved status and education of the members of the medical profession led to the opening of local hospitals in many of the smaller towns and villages under the name of "Cottage Hospitals." Like all other hospitals they are supported by voluntary contributions from charitable persons living in the neighborhood and are staffed by the local doctors who call in a hospital physician or surgeon from the next large town when they are in need of consultation or further help. The first cottage hospital was opened in 1859 and from small beginnings they have now become of considerable size with a matron and nursing staff sufficient for their needs.

All hospitals were at first free to everyone, but as expenses of treatment and administration increased, it has been found necessary to call

upon the patients for some small sum to defray the cost of their maintenance though the members of the medical staff still act in an honorary capacity and receive no remuneration for their services. In London the cost of upkeep has proved so heavy that a "King's Hospital Fund" has been formed to standardize expenditure and make grants to hospitals in proportion to their needs. The money is derived from legacies and bequests from those who prefer to contribute to a well-managed general fund rather than to individual charities.

Although admission to the general hospitals was theoretically free to the poor, it was in fact so hedged round by restrictions as to render it almost impossible for a poor man. At St. Bartholomew's Hospital a patient had first to obtain a Governor's letter, which was necessary even in the most urgent cases, or he had to deposit a sum of nineteen shillings and sixpence for burial fees, which of course was returned if he were fortunate enough to recover. If he died the beadle had to be paid one shilling for giving a death certificate and the bearers were paid two shillings for carrying the body as far as the hospital gate. A shilling was due to the matron for the use of a pall and the steward was paid a shilling for certifying that the patient had died. The scandal of these payments at last became so flagrant that the whole system was swept away and easier means of access became universal. By a coincidence the reform originated with a student at the very hospital in which the abuse had been most rife. William Marsden, a pupil of John Abernethy, was going home one bitterly cold night in 1828

when he found a girl of eighteen nearly dead of disease and starvation lying on the steps of St. Andrew's Church. She had been refused admission to St. Bartholomew's Hospital, hardly a stone's throw away, because she had neither money nor a Governor's letter. He took care of her, started an agitation which led to the foundation of what is now "The Royal Free Hospital" and so abolished the whole iniquitous system.

The voluntary hospitals were designed for the relief of the poor but there still remained the destitute poor who could pay nothing at all and for these, late in time, the parish had to provide. The first workhouse was opened at Bristol in 1697 and soon Poor Law relief spread over the United Kingdom. This was first in the form of isolated institutions, but later as "Unions" when several parishes combined in order to save expense and had a central building into which the poor were admitted under compulsion; for as yet there was no system of outdoor relief. A few beds for the treatment of the sick were set aside in the workhouses, but it was not until after 1834 that sick wards were introduced or arrangements made to appoint very badly paid doctors to look after those who were ill at home. The accommodation at first was meager and extremely bad, but with the growth of public opinion palatial edifices have grown up, properly staffed, where the indigent sick poor are treated in accordance with the most modern developments of medicine and surgery at no cost to themselves, as the money is provided by the ratepayers. These institutions used to be called "Workhouse Infirmaries" but in accordance with modern sentiment, their names

have been changed within the last few years and they are now known as hospitals, usually called after the patron saint of the parish church, "St. James' Hospital, St. Giles," etc.

The public health of the metropolis has been in the hands of two bodies, the London County Council and the Metropolitan Asylums Board, which have just been amalgamated. The Metropolitan Asylums Board, which has never been limited to mental disease, in spite of its name has provided hospitals for the treatment of such infectious diseases as are notifiable by law, like diphtheria, smallpox, scarlet fever and measles, and sanatoria for medical and surgical tuberculosis. The London County Council has dealt more especially with the mentally afflicted and with child welfare. Both bodies are "rate-supported" and their activities have somewhat overlapped. As a single unit the service somewhat resembles that of the Assistance Publique in Paris. Although the amalgamation is rate supported, as were the constituent bodies, it is under the control, as they were, of the Ministry of Health.

CHAPTER IV

MEDICAL EDUCATION

The great corporations which ruled over the medical profession in the Middle Ages appear to have done their best to ensure that some knowledge, both theoretical and practical, should have been gained before the members were allowed to practice. The teaching at the Universities of Oxford and Cambridge was wholly theoretical. The course was a long one for a degree in medicine could not be obtained in less than seven years, during which time the intending graduate must have attended two courses of anatomy if he were going to be a physician and must himself have dissected should be elect to be a surgeon. The degree either of M.B., (Bachelor of Medicine) or the higher one of M.D. which succeeded it, gave him a perpetual right to practise anywhere in England, provided that he treated gratuitously "saltem quatuor pauperes quam primum sese occasio tulerit cum ab ipsis requisitus," that he would not charge too high fees or delay a cure for the sake of gain.

The fraternity of surgeons does not appear to have taught. Before a surgeon was admitted to the guild, he was well established and was favourably known to his colleagues. Apprentices too would have been inconvenient, for these surgeons often stayed in the house of the patient upon whom they had operated until he was cured, and this sometimes involved being away from home for months at a time. They were keen on

war service too and were often absent from the country. The earliest existing diploma granted in England is dated 8th August 1497. It reads:

> Roberd Anson one of the said commonalty in the common hall of the same in London appeared in his proper person the first day of August last past (1497) submitting himself to the examination and the apposition. Where and when the said Roberd by the said John Smith in a great audience of right well expert men in surgery and of others was openly examined in divers things concerning the practice, operative and directive, in the said craft of surgery. And then albeit he hath before this many times been well approved yet now he is newly abled by the said doctor and fellowship and found able and discreet to occupy and use the practice of surgery as well about new wounds, as cancers, fistulas, ulcerations and many other diseases and divers. And the same Roberd thus approved and abled to occupy and practice in the said faculty we have as an expert man in the said faculty approved and abled to occupy and practice in the said faculty in every place when and as often as him best liketh we have licensed him and granted to him by these presents. In witness whereof we have put the common seal of Barbers and Surgeons, Barbers of London. Given at London in the Common Hall of the said Commonalty the 8th. day of August in the year of our Lord God 1497.

It is evident from this that Robert Anson, a barber surgeon, wished to become a consulting surgeon. He presented himself therefore and passed what would now be called a higher examination, which was held in public by a specially appointed examiner.

When the barbers and surgeons united such a higher examination was held occasionally at the request of the candidate, who received "The Great Diploma" if he was successful. It was not often demanded, but the idea was revived in 1843 when a superior order of Members, known

as "Fellows of the Royal College of Surgeons of England," was established, the test being a difficult examination in anatomy, physiology and surgery.

It is easy to trace the course of a medical student after the formation of the United Company of Barbers and Surgeons in 1540. The first step in his career was to find some member of the Company who would take him as an apprentice. He then went with his master to the Barber Surgeons Hall in Monkwell Street, where the Barbers Company had been situated from time immemorial, that is to say long before 1308. Here he appeared before the Court or Governing Body of the Company to show that he was not deformed or suffering from any chronic disease, for it was a tradition handed down from the earliest days of the guilds that apprentices should be healthy and free from blemish or from spot. The opportunity was taken to ascertain whether he could read, write and had some slight knowledge of Latin. This was no great test, for Latin was taught as a living language at every grammar school in the country, so that a boy who knew no Latin must have been very badly educated indeed. The boy was about fourteen years old and if he passed the Court and his indentures were registered, his period of servitude began. It usually lasted for seven years so that he might be made free of the Company and thus able to practise on his own account by the time he was twenty-one. It might however, be prolonged for eight or even nine years. The sum of money paid to the master was at first just sufficient to cover the cost of clothing and feeding the boy in return for his services.

In later years when apprenticeship carried with it valuable reversions, as in the case of those bound to hospital surgeons like John Hunter, Abernethy or Sir Astley Cooper, fees of £500 to £1000 were readily paid. Each master was allowed to take three or four apprentices according to his position in the Company and if he died the apprentices were "turned over" to another master or to the widow for the remainder of the term for which they were bound. The system continued until 1858 when it was finally abolished. Some masters were unfortunate in their apprentices, some apprentices were unfortunate in their masters and became mere drudges, but on the whole the system worked well and a real and permanent friendship existed. The apprentices, being lusty and well fed, needed a tight hand kept over them. The Barber Surgeons fortunately had ample disciplinary power, they could whip or imprison or could suit the penalty to the crime, as when they order a young dandy's head to be shaved at a time it was ultra fashionable to wear the hair long.

The apprentices were taught anatomy and surgery by the Company, the teaching of anatomy being regularized by the clause in the charter which enacted that they might take annually at their discretion four persons put to death for felony. The subjects were probably chosen with considerable care as executions were so numerous that a selection could be made. The apprentices, therefore, were better off at this time than the medical students two hundred years later when it was necessary to resurrect bodies needed for dissection.

The teaching was done by a lecturer [see the frontispiece] who was called "The Reader" and by four "Masters" or "Stewards of Anatomy." The office of reader was well paid and highly honorable, so that there was considerable competition for it. The Company always chose a distinguished physician who was of necessity a university graduate. Dr. Caius, for instance, held the post for twenty years and he was the re-founder of Caius College at Cambridge. The Masters or Stewards of the Anatomy,four in number, were appointed for four years and were usually Members of the surgical side of the Barber Surgeons Company. It was their duty to carry out the dissection, to be present during the lecture and to point out the various structures as they were mentioned by the reader, who did not demean himself by touching the body. Each of the public anatomies lasted for three days and for another three days the Masters of the Anatomy were allowed to teach privately such of the students as desired to learn more. The whole business ended with a feast and it was the duty of the two junior Masters of Anatomy to see that the tables were properly furnished. These anatomical demonstrations took place four times a year and it was open to anyone of the public to attend them. Thus in February 1663 Mr. Samuel Pepys, Secretary to the Admiralty, attended Dr. Scarborough's lecture on the parts concerned in vesical calculus, a subject in which the Diarist was especially interested because he had himself been cut for stone. For each of the public anatomies the lecturer received £10 and the masters of anatomy £3 each, and

this at a time when money was five to seven times more valuable than it is now.

Surgery was taught by lectures held on a Tuesday in every week throughout the year. Attendance upon the lecture was compulsory on every member of the Company from the master to the youngest apprentice and absence from it was punished by a fine graduated in amount according to the standing of the absentee. London was quite a small town and no one would have to come more than half a mile, so the hardship of attending on a fixed day of the week at a fixed time was not great. The lectures were arranged in courses and it took several years to cover the whole subject. They were in the form of a running commentary on some well-known book such as Guido's "Questions," which had been translated into English, or the "Surgery of Tagaultius," which was in Latin, or the textbook might even have been written by the lecturer himself. The earlier lecturers were well-known surgeons of the time (Gale, Clowes and Halle filled the office) but when they died it was found so difficult to replace them that physicians had to be invited to accept the office.

Such pathology as existed was sometimes taught by the lecturer on anatomy and sometimes as a part of surgery. Inflammation and its results were common to both courses and the different kinds of tumor were also discussed in both. It is a little remarkable that no attempt was made to teach clinically. There is indeed some evidence to show that the introduction of patients at lectures was definitely forbidden in London and it was not until 1602 that a clinical examination was first required in Scotland.

The United Company elaborated the system of examination which had always been a part of their policy. No one could practice surgery in the city of London or within a radius of seven miles without their license and it was decided that examination was the best means of determining a man's fitness to practice. Two classes of candidates presented themselves: (1) their own apprentices and (2) surgeons who had been in practice elsewhere, *foreigners*, as they were called technically, though they were not necessarily or usually of another country, who wished to settle in London. The first step of the United Company was to appoint eight examiners, the number being afterwards increased to ten, freemen of the Company but not always of the Court of Assistance. Four of these examiners undertook the examination of the candidates in the presence of the master and wardens of the Company, who might of course be barbers knowing nothing of surgery. Upon the report of the examiners the master, wardens and court of assistance granted the license, or preferment of grace as it was called, and made him free of the Company. In the case of an apprentice it was necessary that he should have served his full term of servitude and that this master should have certified that he was satisfied with his conduct. He then went to the Guildhall, showed his certificate and was formally enrolled a freeman of the City of London which enabled him to practice his calling within the city.

The examination seems to have been a fair test of the knowledge of the time and a good standard was maintained, for many were unsuc-

cessful in passing. As an examiner of many years' experience and after reading the books which had been lectured upon I might have set the following paper and should have passed an apprentice who gained more than 50 per cent. As the Company also gave a Great Diploma which was practically an honors degree, two questions are added to test the knowledge of those who might have been candidates for it. The examination was always oral:

i. From what are the words Chirurgion and Cancer derived? Give the Greek or Latin equivalents for each?

ii. Mention the complexions of the body. How would you know whether a man was of a sanguine or saturnine complexion?

iii. How many bones are there in the human body?

iv. What are the uses of the Liver? Where does it lie in the body?

v. Define an imposthume? How can it be cured?

vi. What does a surgeon mean when he speaks of an algebra? How should the condition be treated when it occurs in the upper arm?

vii. Mention in order the structures which would be divided to expose the great ventricle of the brain, beginning from the skin.

viii. Who were Galen, Avicenna, Lanfrancus, Guido Cauliacus, Johannes Vigensis, Andreas Vesalius, Thomas Geminus and Carolus Stephanus? What discoveries or methods of treatment are connected with their names?

N. B. Questions 7 & 8 need only be answered by those who wish to obtain the Great Diploma.

This system remained in use until 1745 by which time it had become antiquated and medical officers who were taken prisoners in war time complained that it was impossible for foreigners to determine whether they were doctors or barbers and they were often treated as barbers and therefore as privates instead of as officers. The first

signs of a coming change began in London at the Restoration of King Charles II. About 1660 the surgeons at St. Bartholomew's and St. Thomas' Hospitals had become specialized and they brought their apprentices with them into the wards to learn how to bandage, to put up fractures, reduce dislocations, treat wounds and make postmortem examinations. The movement was not entirely altruistic, for on several occasions the governors of the hospital had to point out to the surgeons that they alone were responsible for the patients under their care and that they were not to be left to the apprentices or "cubs" as they chose to call them. The movement spread, however, and was found to be mutually advantageous, so the hospitals first provided a reading room which in time became a library and a museum where the rarer specimens obtained from the operating room and the dead house were carefully preserved.

This system remained until about 1730 when the profession as a whole began to feel that it was insufficiently educated and there arose the system of private medical schools. Men like Abraham Chovet, who subsequently migrated to Philadelphia, and Edward Nourse the master of Percivall Pott, began to lecture privately on anatomy and surgery. William Cheselden, surgeon to Guy's Hospital, taught more by his writings than by lectures. He has, however, the merit of having had Samuel Sharp as an apprentice and to Sharp we owe the beginning of the private medical schools in England. At the request of some naval surgeons he formed a class. It was successful and the class was continued by William Hunter who soon added his brother John Hunter

as a demonstrator. This school, known as the Hunterian or the Windmill Street School of Medicine became the most famous in the world. It gathered to itself all the younger surgical talent and sent out well-instructed and thoughtful students to all parts. In fact it converted surgery into a scientific profession.

The success of the Hunterian school was so pronounced that it found many imitators and there arose a whole group of private schools which had for their object to get the pupils through the medical examinations rather than to teach them scientifically. They were founded by men with a real gift for teaching, who liked the drudgery, were often eccentric and were usually unable to work with others. Most of these schools pursued a meteoric course, rose to fame and died with their originators.

The success of the private schools roused the staffs of the general hospitals to emulate them and at St. Bartholomew's, St. Thomas' and Guy's Hospitals the teaching instead of being dependent upon single members of the staff was organized into a complete whole. At first the members of the staff undertook the whole duty of lecturing and teaching anatomy, physiology, surgery, medicine, botany, materia medica, chemistry and physics, one person often teaching two or three subjects. This became impossible as knowledge increased and thus each of the London hospitals came to have large and expensive medical schools attached to them. These schools remained wholly distinct from the hospitals and were supported by the fees of the students. They were thus "proprietary schools," ventures on the

part of the members of the hospital medical staff, who shared in any profits there might be after paying all expenses. These profits varied necessarily from year to year. They might be considerable, they were usually moderate and were occasionally less than nothing, for the lecturers paid the expenses of the class out of their own pockets. The system introduced a healthy spirit of rivalry and did much to raise and maintain the standard of medical education.

The influence of the Hunterian school of medicine soon made itself manifest in the provinces. Pupils of the school and sometimes former teachers like Sheldon, settled in the provincial towns. Birmingham, Bristol, Exeter and Leeds thus became centers of medical education and utilized the resources of their hospitals for clinical teaching.

Private schools never flourished to the same extent in Scotland and Ireland as they did in London because the teaching was done effectively by the universities. But in both countries there was an extra-mural school which was independent of the official teachers.

The curriculum at the present time lasts five years and the medical student in London attaches himself to one of the twelve general hospitals with medical schools. They are St. Bartholomew's, St. Thomas', Guy's, Westminster, St. George's, The London, The Middlesex, University College, Charing Cross, King's College, St. Mary's and The Royal Free Hospitals, the latter hospital being devoted to the training of women doctors. Each hospital provides a complete medical education, but as there is no reciprocity a student

remains throughout his entire career at the hospital where he first entered. The teachers of medicine, surgery and midwifery are always members of the staff of the hospital to which the school is attached and the students have the right of visiting the hospital patients and of taking a minor part in their treatment under the direct supervision of the house physician, house surgeon or resident obstetric officer, who correspond to the internes of the foreign system.

During the curriculum three examinations at least are required of the student. The first in Latin, English, a modern language, elementary mathematics, chemistry and physics; the second in anatomy and physiology about the middle of the course and the third in medicine, surgery, midwifery and pathology. The examination in each subject is partly written, partly oral and practical. In medicine and surgery the student is taken to the bedside and is asked to examine a patient, being questioned as to the nature and treatment of the illness.

From time immemorial the education and licensing of doctors in Great Britain and Ireland has been independent of the State and has been in the hands of the universities and of the corporate bodies which have already been mentioned. It has thus come about that there are many bodies with power to grant degrees, licenses and diplomas. All these show that the holder has been properly educated and has acquired a certain amount of medical knowledge as tested by examination. He may therefore practice his profession in any recognized manner which he prefers. If he wishes to recover fees in a court of law, to sign death

certificates or to hold any public appointment, whether civil or military, he must produce his degree, diploma or license to the General Medical Council and pay a fee of £5.5.0. His name is then inscribed in an official register kept by that body and he becomes a "Registered Medical Practitioner." The Register is accepted by the State as evidence of qualification.

The universities confer two medical degrees, the one called the Bachelor of Medicine or Surgery (M.B., B.CH.) the other the Doctor of Medicine or the Master of Surgery (M.D., M.S. or M.CH.). The corporate bodies give a license or diploma which allows the holder to put certain letters after his name, e.g. Licentiate of the Royal College of Physicians (L.R.C.P.) Member of the Royal College of Surgeons (M.R.C.S.), Licentiate of the Society of Apothecaries (L.S.A.). The Royal College of Physicians and the Royal College of Surgeons give a higher qualification for those who intend to devote themselves more especially to medicine or surgery. They pass an additional examination and are called respectively Member of the Royal College of Physicians (M.R.C.P.), and Fellow of the Royal College of Surgeons (F.R.C.S.).

The degrees and licenses granted by these bodies only applied at first to the country in which they were granted, but since 1858 a person who has been duly qualified in Great Britain or Ireland is allowed to practice in England, Scotland or Ireland, though not necessarily in every dominion or crown colony.

There are at the present time three groups of medical practitioners in Great Britain and

Ireland: the family practitioners who form the bulk of the profession; the physicians and the surgeons. The general practitioners and the physicians call themselves "doctors," though strictly speaking it is only the graduates of universities who have the title viz.: Bachelor of Medicine by courtesy outside their university and Doctor of Medicine by right as having had that degree conferred upon them. The surgeons have retained the title of "Mister" (Mr.) a colloquial form of the old term "Master" i.e. *Chirurgiae Magister*. In theory the physicians and surgeons act as consultants, that is to say they only see patients who are introduced to them by a general practitioner; as a class they are the teachers in the medical schools and they alone staff the teaching hospitals.

CHAPTER V

SPECIALISM

Medicine in the British Isles has never been a complete whole. From the earliest times there is evidence that physic or inner medicine has always been practiced separately from surgery. It is rare even in these days to find anyone who is equally interested in medicine and in surgery. A different type of mind is required for each and the cleavage is still as marked as of old, although an elementary knowledge of every part of the healing art is required of those who desire to practice. In surgery itself certain parts were always left to quacks, mountebanks and irregular practitioners, seemingly for no special reason, but merely because it had always been the custom to do so. Thus, hernia, the removal of wens, couching for the cataract, tooth-drawing and the cure of wryneck which included an elementary orthopedic surgery were all considered beneath the dignity of the surgeon proper. Specialism gradually crept in and practice in these departments was considered lawful and was found to be lucrative.

MIDWIFERY

Midwifery had long been in the hands of midwives, who only called in a doctor to help when there was grave danger or when it was necessary to employ the rude instruments which were in use before the Chamberlen family (1569–1728) invented the forceps, which did both harm and

good. Some attempt had been made to teach the women who were employed as midwives, for Percivall Willoughby (1596–1585) writes in his "Observations in Midwifery:"

> When the meanest of the women, not knowing how otherwise to live, for the getting of a shilling or two to maintain their necessities become ignorant midwives, then travailing women suffer tortures after which followeth the ruination of their health and sometimes death. In London the young midwives be there trained seven years first under the old midwives before they be allowed to practice for themselves.

There is nothing to show when this system began or how it ended but the whole question of obstetrics underwent a great change in the seventeenth and eighteenth centuries. In the seventeenth century William Harvey put it upon a scientific basis, and rather less than a hundred years later it was made practical by the genius of William Smellie. The fame of William Harvey as a pioneer in midwifery has been largely obscured by his discovery of the circulation of the blood, but his treatise on development shows that he had a practical as well as a theoretical knowledge of the subject. Smellie, on the other hand was severely practical and round him raged the great battle of the man-midwife and the woman-midwife. The women were conquered and men took their place in the lying-in chamber. They have only recently retired to gynecology and the women have again come into their own. In 1724, Dr. John Maubray began to teach the elements of midwifery to students privately. The first lying-in hospital was opened in London in 1739 when Sir Richard Manningham caused a few beds to

be set aside in St. James' Infirmary and these beds were supported for their special purpose by voluntary contributions. Several lying-in hospitals were founded in quick succession in London and were followed by others in Scotland and Ireland. At the Royal Infirmary in Edinburgh the establishment of a lying-in ward was coincident with the first provision of a public bath. It is recorded in 1778 that "in the west wing are one cold and two hot baths with their respective dressing rooms which are intended for the people of the City, no patient in the Hospital having at any time admission to them." Puerperal fever was at first as great a scourge in these institutions as it was in other countries; but the British physicians in charge began to set their houses in order about 1833 when Dr. James Copland at the Queen Charlotte's Hospital laid down a series of rules which reduced the mortality.

DISEASES OF THE EYE

Ophthalmology had long formed a separate branch of surgery practiced by persons who were charlatans and mountebanks. The tribe was not undistinguished, for men like the Chevalier Taylor went from court to court through Europe and by their boasting and impudence deceived even the elect. Such a great teacher as Haller, who wrote his eulogy in 1767, hesitated whether to call Taylor a quack or a learned man. Dr. Johnson had no illusions on the subject, for he said roundly, "Taylor is the most ignorant man I ever knew, but sprightly." The verdict was warranted, for when the doctor quoted Horace to him the Chevalier thought it was something of his own composition.

Taylor described himself as "The Chevalier John Taylor, Ophthalmiator, Pontifical, Imperial and Royal, who treated Pope Benedict XIV, Augustus III, King of Poland, Frederick V, King of Denmark and Norway and Frederick Adolphus, King of Sweden." He could also have added "and Oculist to King George II of England."

Ophthalmic surgery became a part of surgery proper about the middle of the last century when some brilliant men devoted especial attention to it, Sir William Lawrence, Sir William Bowman, George Critchett and Henry Power were among the first to do so. They had all been general surgeons attached to the teaching hospitals in London. Lawrence continued to practice general surgery; Bowman, Critchett and Power specialized. Each had already won laurels in other fields, Lawrence as a great teacher of surgery and a first-class fighting man in medical politics; Bowman as a scientific investigator in physiology whose name is still known in connection with the minute anatomy and physiology of the kidney, Critchett as a fine operator and Power as a physiologist of repute. The specialization was at first in connection with operations on the eye. The introduction of the ophthalmoscope by Helmholtz in 1851 and the correction of errors of refraction due to the work of Donders led to still further subdivision. This tendency has been very marked in recent years when some practitioners in this field have chosen to apply their knowledge to the correction of errors of vision, others to the diagnosis of general disease and yet others to the operative parts of the science. There is not yet complete separation,

as most ophthalmic surgeons undertake every part of the work.

ORTHOPEDICS

Orthopedic surgery broke away from surgery about the same time as ophthalmology. Like that branch, it had long been in the hands of quacks and the Rev. John Ward who was Vicar of Stratford on Avon records in the spring of 1672 that:

> The Mountebank that cuts for wrynecks, cut three tendons in one child's neck and he did it thus; First by making a small orifice with his lancet lifting up the tendons for fear of the jugular veins and cutting them upwards, they give a great snap when cut. The orifice of his wounds are small and scarce any blood follows. About a day or two after the child will be sickish some humour falling on the stomach as the mountebank says. When he hath cut it he bends the child's neck the other way and puts it on a cap and a Fillet to the cap and so ties it under the armpits and so by constant bending its neck that way it becomes straight and upright.

A division into an operative and a manipulative side of treating deformities had already taken place before the orthopedic surgeon joined the two branches. The manipulative side had been in the hands of bone-setters from time immemorial, a race which had acquired skill partly by the fact that their art was often hereditary and partly by their willingness to undertake patients whom the regular practitioners had failed to cure. Mrs Mapp was amongst the most famous of the bonesetters in London about 1736. She acquired an enormous and fashionable practice, but unfortunately took to drink and died in poverty.

The practice of orthopedic surgery as a regular branch of surgery dates from the middle of the last century and is a little earlier than the beginning of ophthalmology. William John Little and William Adams were its chief exponents and they had gained their inspiration chiefly from German and French sources. Hugh Owen Thomas of Liverpool himself descended from a family who had practiced "bone-setting for several generations," qualified as a medical man and did much to improve the manipulative side of orthopedics. His name is perpetuated by "Thomas' splint" which is largely used in diseases of the hip and knee. His nephew Robert Jones carried on the work and greatly increased its scope. The European war gave unlimited opportunities for opthopedic work; advantage was taken of these opportunities and within the last decade orthopedic surgery has been revolutionized.

DISEASES OF THE THROAT

Laryngology and the treatment of diseases of the nose and ear is of still more modern origin. G. G. Babington as early as 1832 invented an instrument for examining the larynx but it never came into practical use and its value was not appreciated by those to whom he showed it. Manuel Garcia, a teacher of singing, examined the method of voice production in 1854. He stood in front of a looking glass holding a dentist's mirror in his pharynx and, allowing the full sunlight to enter his throat, was able to see the action of the larynx during life. He made little use of his discovery and as it was found to be trying to persons upon whom he attempted to use

it, the method was likely to have fallen into disuse. Fortunately Prof. Czermak of Pesth became interested, employed reflected instead of direct sunlight and after many persevering attempts on himself recognized its value and in 1858 gave demonstrations of the laryngoscope in many of the principal cities in Europe. Morell Mackenzie who had gained the Jacksonian Prize at the Royal College of Surgeons of England in 1863 with an essay "On Diseases of the Larynx" soon became expert in the use of the instrument and devoted his life to the diagnosis and treatment of these diseases. It was he who attended Frederick, Emperor of Germany, and took a sanguine view of his case which was belied by its subsequent progress. Laryngology soon became so well-recognized and important a specialty that a *Journal of Laryngology* was founded in 1887.

DISEASES OF THE NOSE AND EAR

Otology and rhinology became a specialty somewhat later than laryngology. Quinsy had always been known; for folk tales tell of kings and others who were cured of quinsy by being made to laugh, when of course the abscess burst. For the most part, therefore, the disease was allowed to run its course. Then came a time when it was fashionable to have the tip of the uvula cut off and in the middle of the last century Joseph Toynbee and others made fortunes by the removal of tonsils. It was not, however, until 1868 that otology and rhinology came into their own. In that year Wilhelm Meyer of Copenhagen first described adenoids, recognizing the symptoms, pointing out their clinical importance and showing

how they should be treated. The scientific study of diseases of the ear and nose really dates from this time, although the *Journal of Otology* was established in 1899.

DISEASES OF THE SKIN

Dermatology in England began with Dr. Robert Willan and his pupil Dr. Thomas Bateman of Norwich at the commencement of the nineteenth century, but it did not become a well-recognized specialty until about 1870 when Sir Jonathan Hutchinson interested himself in its study and Sir Erasmus Wilson, taking the advice of a friend, so wrote and talked about diseases of the skin that people began to scratch themselves when he entered a room.

RADIOLOGY

Radiology is almost the youngest born of the specialties and dates from the discovery of *x*-rays by Roentgen in 1895. It was practiced at first in its entirety, but it has now largely become divided into two parts, the one carried out by the skilled radiologist with medical knowledge; the other by the radiographer who develops and manipulates the plates and films. There is already evidence of a still further specialization, for there are radiologists who are specially skilled in connection with the teeth, with the digestive organs, with the contents of the thorax or with the nervous system.

Last born of all the specialities are deep therapy and radium used as a curative agent. Radium was discovered in 1896 by Becquerel and attention was drawn to its radio-active properties by M. and Mme. Curie two years later. For a long

time its clinical value was insufficiently recognized. A Radium Institute was founded in London in 1911 for the treatment of patients and for researches into the therapeutic properties of radium and radio-active substances.

There still remain two specialties to be noticed: dentistry and lunacy; for although both are a part of general medicine and surgery, they have had a wholly independent existence from a very early period.

DISEASES OF THE TEETH

Dentistry has become a profession apart since 1898. The very word dentist did not come into use until 1759. The original name was a toothdrawer, and as toothdrawers they long had a loose connection with surgery. Some of the more respectable were even admitted members of the various barber surgeons companies when they wished to practice in cities where these bodies held sway. The majority were itinerant, attending fairs and operating in booths or on platforms to the music of drums and other noisy instruments. They had a musical cry which was to be heard in the streets of London until about 1800: "Touch and Go, Touch and Go. Ha' ye any work for Kindhart the toothdrawer?" and as a mark of their trade in early times they had a sash across their bodies ornamented with the teeth which they had extracted successfully. In later days they wore a hat which had a brooch with a rose and crown and two letters upon it. Extraction was then the panacea for all diseases of the teeth though there must have been occasionally some toothdrawers endowed with imagination and technical skill,

for some early dentures are preserved in museums and there are skulls which show various devices for securing loose teeth. Examination of skulls at various dates show that the incidence of dental caries has waxed and waned at different periods in a remarkable manner.

The determined efforts of a few enlightened men have succeeded in converting the trade of tooth-drawing into the profession of dentistry. The first changes began about 1810–1820. They did not go far and the advances made were soon outstripped by the improvements beginning in America about 1849. Rogers and John and Charles Tomes (father and son), were among the leaders in Great Britain of those who were determined to make dentristry a real profession. They began in 1859 by ensuring a better standard of preliminary education and thus obtaining a superior class of students. This was followed in 1878 by securing a diploma for those who wished to undergo an examination and in 1921 the profession was consolidated by the setting up of a Register of qualified dentists and a Dental Board armed with disciplinary powers. Every dentist, therefore, has now to show that he is properly qualified both in the theory and practice of the art he practises before his name is placed on the Register.

MENTAL DISEASE

The treatment of mental disease has undergone a complete change within the memory of those now living. The "madhouse" was replaced by the "Lunatic Asylum;" the Asylum in turn has given place to the "Hospital for the Cure of Mental Disease." Each change has been for the better

and there are now homes into which persons can be admitted voluntarily upon their own application. Bethlehem has long been associated with lunacy. It was founded on 23 October 1247, on the site now occupied by the Liverpool Street Railway Station, by Simon Fitz-Mary, a citizen and Sheriff of London. The prior and monks belonged to the Order of the Star of Bethlehem and were perhaps among those who had visited the Holy Land as crusaders. The priory had become a hospital about 1330 but it is not known whether at that time it admitted lunatics to the exclusion of other sick people. Henry VIII certainly transferred lunatics from a hospital which had long been in existence at Charing Cross, and from 1529–1536 George Bullen, the brother of Anne Boleyn, sometime Queen of England, was "Keeper of Bedlam."

The change in the treatment of lunatics began in 1792 when William Tuke at York with other Quakers established the Retreat and introduced humane methods of dealing with the unhappy victims of mental disease. Fetters and manacles disappeared, but the whirling chair, the plunge bath, the shower bath and the five drops of croton oil were still in use until the study of insanity was seriously undertaken at the West Riding and other asylums in England, Scotland and Ireland from 1860 onwards by those who are still living among us. Much is now known of the cause of mental disease and instead of its being looked upon as a visitation of divine providence and inscrutable it is now treated as a part of general medicine.

CHAPTER VI

NURSING

Nursing has had a long and continuous tradition in London. It began when St. Bartholomew's Hospital was opened in 1123 and four Sisters formed an integral part of the foundation. They were professed nuns of the Order of St. Augustine for the Saint gave his rule to women before he placed it on men. They were chosen by the prior of the convent on the recommendation of the master and brethren of the hospital and swore fidelity to the prior and obedience to the master. They lived in a common refectory and slept together in a dormitory. For victuals they received daily four loaves of white bread, three loaves of second quality bread, half a flagon of ale and the better of the two dishes of cooked meat served to the brethren. They wore tunics and overtunics of grey cloth and it is expressly stated that the tunic was not to reach lower than the ankles, a sign of mortification at a time when skirts were unusually long and flowing. One of the four sisters was in charge of all the articles of clothing and other necessaries issued to the patients, as well as to the other sisters. For peace sake it was ordained that there should be no grumbling if the clothing did not come up to the expectation of the recipient or if it had already been worn by someone else. All were under the master of the hospital, but there is no mention that one was above another, for all were equal.

This system lasted for four hundred years and during this long period some of the sisters must

have become specially skilled in midwifery for many women were delivered in the hospital. All learned that tradition of skilled but not necessarily scientific nursing, which still exists as the hall-mark and foundation of a good nurse: the patient first and always, self-effacement, gentleness, courtesy and the numberless small details which can only be acquired by observation and practice.

There was no break in the tradition when the hospital was refounded on secular lines. The sisters ceased to be professed nuns but they still remained attached to the hospital for life. In 1544 their number was five and in 1551 they were increased to twelve. A matron was appointed with personal charge of all the bedding and with orders to see that the sisters occupied their spare time in spinning, that they went to the common dormitory at the proper hour and that they did not enter the ward to which they were attached before six in winter or nine in summer unless a patient were actually dying. The appointment of sister carried with it a uniform, just as in the old religious times when they wore a habit. Six yards of cloth at 22/6 a yard, russet brown at first, blue, as it still remains, since 1555. The common dormitory remained until 1787, when the hospital was rebuilt and the sisters petitioned that they should each have a small bed-sitting room overlooking the ward, an arrangement which still remains at St. Bartholomew's, though it is doomed.

There are two interesting records of the sisters about this time which is generally looked upon as a period when nursing was at its lowest ebb. The one is in a formal report in 1747 upon

the work of all departments in St. Bartholomew's hospital when some were found to be most unsatisfactory, but "your Committee find that there has been no complaint of any misbehaviour of the Sisters or Nurses of this Hospital and your committee is of opinion that the Sisters and Nurses have done their duty." The other record shows them to have been a strong and self-reliant body of women for they had made a determined attack upon a sheriff's officer and obliged him to relinquish a patient whom he had captured in one of the wards.

As early as 1647 women helpers had been introduced and in process of time they became the staff nurses. To distinguish them from the sisters it was ordered in 1821 that they should wear a brown uniform. These regular sisters and nurses did their duty nobly as a rule, though there were of course occasional exceptions. The odium acquired by nurses which is reflected in the caricatures of Rowlandson and the writings of Dickens was due to the bad practice of hiring women as occasional helpers to attend at the rate of a shilling a night. They were for the most part drunken and thoroughly unreliable.

A new tradition embodying a part of the old one began with Miss Nightingale and was seen at its best at St. Thomas' Hospital. Its foundation was in 1833 when Theodor Fliedner opened a little hospital at Kaiserswerth in Germany and developed a system of deaconess nurses. The Anglican church established an order of Sisters of Mercy in 1848 and the Sisterhood of All Saints in 1851. Both institutions did good work, so the way was paved for the improvements introduced by the

energy of Miss Nightingale during the Crimean War in 1854 for she had already visited the Kaiserswerth institution. When the War was finished Miss Nightingale received a large sum of money in recognition of her services and this sum she generously used to found a training school for nurses at St. Thomas' Hospital in May 1860. Her intention was to teach a superior class of women who should in turn act as "nursing missioners," to leaven the entire nursing world as it then existed. The plan succeeded admirably and within a few years the nursing in every civil hospital changed radically. The old well-meaning, rough-handed and often rough-tongued nurse disappeared, the menial work of scrubbing was abolished and nursing became more than an occupation, though it had not yet become a profession. Every general hospital was a school for nurses; grades were introduced, separated by examinations; theory was taught by the medical staff who lectured; practice was inculcated by the sisters and a certificate was given to every nurse who successfully passed an examination at the end of a three years' course of training. Unsuccessful attempts were made to obtain state recognition for nurses by establishing a state examination and a state registration as had already been done for the medical profession in 1858 and for dentistry in 1878. In 1925 these ends were attained and although the state recognition and registration is not yet compulsory a nurse has little chance of employment until she has availed herself of them.

Of late years nursing has tended to specialization and where there were formerly only two

groups: hospital nurses and private nurses, there are now many branches. There are Queen's nurses who undertake district nursing in every part of the British Isles; there are school nurses who are specially concerned with the health of children attending the State supported schools and there are those who devote themselves to welfare centers and health missions. In spite of this apparent dissociation a group of far-seeing women is doing all in its power to consolidate the profession. They established a College of Nursing 1916. Clubs have been provided not exclusively for nurses but where the majority of the members belong to that profession, and a scheme of insurance has been formulated to provide for the sickness and sadness of the old age which comes to nurses even more often and sooner than to others who are less self-sacrificing.

CHAPTER VII

THE MEDICAL SOCIETIES

The Royal Society served all the purposes of a medical society in England from its incorporation by King Charles II in 1662 until about 1752. The Society elected as its Fellows all who were interested in what is now called natural science and welcomed them with especial favor if they contributed papers founded on experiment. For many years, therefore, the *Transactions* of the Society are filled with communications on medical subjects.

A medical society was established in Edinburgh as early as 1731. It met every Saturday evening and the papers read before it were mostly due to Alexander Monro *primus* whose ability as a teacher led very largely to the immediate success of the Edinburgh medical school.

John Hunter, who converted surgery into a science, was so friendly and sociable that he established a number of small clubs or societies where he could meet his friends and pupils to discuss the various problems which he was constantly meeting in the course of his researches. He read very little but obtained all his collateral information by asking questions of his acquaintances and by setting them to work to solve his puzzles. His example was followed by other men of unusual genius like Lettsom and Fothergill, both Quakers, and afterwards by Astley Cooper and Abernethy, great teachers.

The societies were divided into two groups. The first originated by doctors who wished to

publish cases and compare them with cases seen by other medical men. The second group was founded by the teachers who wished to keep in touch with their students and instruct them how to report and discuss the rarer conditions which might come under their notice. Both groups endeavored to maintain a medical library from which their members could borrow. The money necessary for this purpose was obtained from the doctors by subscription and from the students by fines for non-attendance, for keeping books beyond the allotted time, or for other infractions of rules. Many of these societies were ephemeral and ceased to exist when the moving spirits died, but many of both groups are still active and flourishing.

Of the students, societies the oldest are the Pupils Physical Society at Guy's Hospital, which is an offshoot of the Physical Society founded at Guy's Hospital in 1771, and the Abernethian Society founded at St. Bartholomew's Hospital a few years later. The youngest is "The Osler Club" established in memory of a beloved physician by a devoted band of medical students. The oldest of the practitioners' societies is the Medical Society which was instituted in London in 1773 at the house of Dr. Lettsom in Bolt Court, Fleet Street. It consisted at first of thirty physicians, thirty surgeons and thirty apothecaries. The limitation of numbers was long since abolished and it is now among the most flourishing of the medical societies, maintaining it original friendly character and having accumulated in the course of years a remarkable collection of books written chiefly by

the English and Continental physicians of the seventeenth and eighteenth centuries when the Leyden school was in the ascendant. The Royal Medical and Chirurgical Society hived off from the Medical Society in 1800. For 100 years it led a useful and somewhat aristocratic existence. Election to the Fellowship was by no means certain and the papers were submitted to drastic scrutiny by referees before they were read in public. To have been admitted a Fellow of the Royal Medical and Chirurgical Society, therefore, gave a certain cachet to the individual for it showed that he had been approved by his brethren in the profession. The previous scrutiny of the communications led to a high standard, but was harmful because it sometimes caused the rejection of papers in advance of their time and conduced to an overelaboration which often made them dull and so exhaustive as to be incapable of discussion.

In 1907 the Medical and Chirurgical Society merged itself into "The Royal Society of Medicine," thus following the example of the medical profession in Dublin which in 1882 had amalgamated its individual societies to form "The Royal Academy of Medicine in Ireland." Nearly all the societies in London which had been formed during the nineteenth century were thus absorbed with the exception of the Harveian, the Hunterian, the Medical and the Ophthalmological. The Pathological, the Clinical, the Gynecological, the Laryngological and the Otological became sections of the Royal Society of Medicine, thereby losing somewhat of their individuality though they retained their autonomy.

The generosity of Mr. G. Buckston Browne has recently introduced a new feature into the life of the medical societies, for he has given a considerable sum of money to the Harveian Society, the interest of which is to pay for an occasional banquet to the members. He has thus re-established the love-feast which was so characteristic a feature of the profession in its earliest days.

There only remains to be mentioned The British Medical Association which was established in quite a small way by Charles Hastings of Worcester in 1832 as the Provincial Medical and Surgical Association. The name was afterwards changed to "The British Medical Association" which was completely remodelled in 1883. The Association has a very large membership with branches in every dominion. It maintains a first-rate journal and exercises great influence both within and without the profession.

CHAPTER VIII

SOME MASTERS OF BRITISH MEDICINE

The earliest outstanding names amongst the Masters in British Medicine are John of Gaddesden and John Arderne, both living in England during the greater part of the fourteenth century. *John of Gaddesden* had already gained so great a reputation as to be mentioned by Chaucer in the well-known lines:

> Wel knew he the olde Esculapius,
> And Dioscorides and eke Rufus;
> Old Ypocras, Haly and Galien;
> Serapion, Razis and Avycen,
> Averrois, Damascien and Constantyn;
> Bernard and Gatesden and Gilbertyn.

Gaddesden was born about 1280 and wrote the "Rosa Anglica" in 1314. He was a graduate of the University of Oxford both in medicine and theology. The Rosa is a textbook of medicine and, although it is largely a compilation, the numerous personal observations show that Gaddesden must have had a large practice. His contemporaries spoke of him as being unusually skilled in the treatment of the diseases of women.

John Arderne (1307–*ca.* 1380) served during the hundred years war with France, spent many years in practice at Newark and finished his career in London. His published writings appeared in a series of small manuscripts which have not yet been all printed. They are full of racy details and show that he had an extensive and lucrative

practice, chiefly surgical, among the nobility and higher clergy; he would now be called a consulting surgeon. He was not in orders and served his apprenticeship in war like Ambroise Paré two hundred years later. He perfected, perhaps originated, a simple cutting operation for the cure of fistula. He wrote in Latin like John of Gaddesden but his works were so highly prized that they were soon translated into English. For a time they were well known but were forgotten during the Wars of the Roses and attention has only recently been called to them.

William Harvey is justly considered one of the greatest masters in English medicine, and indeed in world medicine, for his experimental proof that the blood circulated through the body, though for want of a microscope he was unable to demonstrate the existence of capillaries. He was interested in the development of animals and was at once a great comparative anatomist, physiologist and pathologist. Born in 1578 and dying in 1653 he came of a business family, his brothers in due course becoming merchant princes trading chiefly with Turkey. William Harvey himself was educated at Cambridge, was appointed Physician to St. Bartholomew's Hospital in London and throughout his life was attached to the Court as physician to King James I and his son King Charles I, to whom he was devotedly attached. Harvey had, too, some knowledge of art for he was sent to Rome by the King to buy pictures. Harvey's description of his discovery of the circulation of the blood in the little pamphlet published in 1628 is too well known and too easily attainable to be more than

mentioned here. So novel a doctrine met with fierce opposition from many of Harvey's contemporaries throughout Europe. It was gradually accepted by the younger generation, however, and in due course became a commonplace and one of the fundamental supports of modern medicine.

Thomas Sydenham (1624–1680) was the great master of the *practice* as compared to William Harvey who was the master of the *science* of medicine. Sydenham broke with tradition the more easily as he was brought up in an atmosphere of revolt and served during the Civil War in England upon the Parliamentary side. He went back to the Hippocratic writings and like them endeavored to discover what actually happens to a sick man and not what doctors think happens to him. He went to the bedside for his facts and observations and cared little for postmortem findings. He was essentially a clinical physician with little or no respect for the scientific theories of his contemporaries. His description of gout, a disease of which he had personal experience, is looked upon as a masterpiece.

William Smellie (1697–1763). The practice of midwifery had fallen to the lowest ebb at the beginning of the eighteenth century and critical knowledge was so bad that in 1727 it was seriously discussed throughout England whether Mary Tofts, the wife of a laborer at Godalming, had or had not given birth to litters of rabbits. Lying-in patients were for the most part delivered at their own homes, by ignorant and dirty midwives who only summoned a doctor in the most extreme cases, and there was no public institution or charity set aside for the purpose.

Progress was slow until the arrival in London of Dr. William Smellie at the end of 1738 or the beginning of 1739. Smellie was a Scotsman born in Lanark in 1697, where he was educated and practiced as an apothecary with such success that he was able to buy some land. He early became interested in midwifery and after a visit to Paris settled in Pall Mall in London where he had for a time his fellow countryman, Dr. William Hunter, as a guest. Being active, intelligent and a good mechanician, Smellie began to take classes in midwifery which were of a practical character, for he invented an apparatus and made a "phantom" by means of which the mechanism of labor could be demonstrated at leisure. He soon acquired a great reputation and in 1752 published a remarkable treatise on the "Theory and Practice of Midwifery." It is written almost entirely from his own experience, is the foundation of scientific obstetric medicine and entirely discards the older teaching and the superstitions connected with it. After a laborious and successful life in London he retired to his native town, Lanark, where he died on March 5, 1763 at the age of sixty-six.

It is a little difficult for some to decide whether *William* or *John Hunter* was the greater master in medicine. William Hunter (1718–1783) had the more varied interests; John (1728–1793) devoted himself to a single subject, the exposition of Life in all its forms and branches. Both brothers left noble museums, the one in Glasgow the other in London. They came of an old Scotch farmer stock from the immediate neighborhood of William Smellie's birthplace and like him settled in London without

friends and with very little fortune. William Hunter made his way by teaching anatomy and by midwifery; John Hunter began by assisting in his brother's school and contributed so greatly to surgery that it might be said that he found his profession an art and left it a science. Physically a small man and nearly always in bad health, he was indomitable and was prodigiously industrious. His curiosity was unquenchable, he formed theories, put them to the test of experiment and cast them aside ruthlessly when they failed to answer the tests to which he subjected them. His contemporaries thought but little of him for he was in advance of his time, but his pupils held him in the highest esteem. They proved themselves to be the leaders of surgery in the next generation and their proudest boast was that they had attended the lectures of John Hunter, whom they called affectionately "the Dear Man."

Edward Jenner (1749–1823) is a household word in all countries as the introducer of vaccination against smallpox. A pupil resident in the house of John Hunter, he derived from his master a portion of that spirit of scientific enquiry with which John Hunter was so richly endowed. True to his master's principle "Don't think, try," he put a long-thought-out theory to the test of experiment on May 14, 1796, when he vaccinated James Phipps, a boy of eight, with lymph taken from vesicles of cowpox on the hand of Sarah Nelmes. The boy had cowpox and on July 1 was inoculated with smallpox and did not have smallpox. From that day Jenner spent his life to show that cowpox protects the human constitution from

the infection of smallpox." The fight was long and stern but in the end he won and in spite of an opposition which still smoulders and occasionally breaks out his conclusion is accepted by the whole civilized world.

The English mind has always preferred facts to theories and it is not surprising therefore that English physicians have been careful to verify their diagnoses by constant visits to the post-mortem room. Morbid anatomy thus attained a very important position until the use of the microscope and the advent of bacteriology somewhat displaced it. The zenith in England was perhaps reached by the physicians attached to Guy's Hospital and medical school in London during the nineteenth century. *Richard Bright* (1780–1858); *Thomas Addison* (1793–1860) and *Thomas Hodgkin* (1798–1866) became famous throughout the world by their discovery of the morbid changes in the kidneys, the suprarenal capsules and the lymphatic glands respectively, the results of which are now known as "Bright's disease"; "Addison's disease" and "Hodgkin's disease."

Of *Dr. Bright* it was said that his powers of observation were almost phenomenal and that his apparatus was of the simplest, nothing more than a candle and a spoon, for by heating the urine of a patient he demonstrated the presence of the albumin in cases of granular kidney which his predecessors and contemporaries had failed to recognize. Of an even temper, cheerful disposition and sincerely religious character, he soon enjoyed a large practice and was better known abroad than any other British physician of modern times. Sir Thomas Barlow wrote of him that "there has

been no English physician, perhaps it may be said none of any other country, since the time of Harvey, who has effected so great a revolution in our habits of thought and methods of investigating morbid phenomena and tracing the etiology of disease as Dr. Richard Bright. To those who have received the knowledge of the connection of dropsy, albuminous urine and disease of the kidney among the first rudiments of medicine, the facts which establish their connection may appear so simple and easily ascertained that the amount of labor, the accuracy of the observation and the rigid adherence to the inductive method which characterized the whole of Bright's researches may hardly have been suspected still less adequately appreciated."

Thomas Addison lectured jointly with Dr. Bright upon medicine in the medical school attached to Guy's Hospital. He was the first to point out in 1849 that three patients who had died under his care from exhaustion accompanied with a general discoloration of the skin "were found on inspection after death to have a diseased condition of the suprarenal capsules." In two of the cases no disease could be found in any other part of the body. The term "bronzed skin" was used to describe the discoloration and Oliver Wendell Holmes spoke of it not inaptly as "cutis aenea." Less happy in his disposition than his colleague, Bright, Thomas Addison was a sufferer throughout his life from attacks of profound melancholia.

Dr. Hodgkin with the perseverance which he had inherited from his Quaker forbears devoted his life to morbid anatomy and in addition to his papers "on a peculiar enlargement of the

lymphatic glands and spleen" to which the name of Hodgkin's disease is now given, he was the first to describe in 1827 the retroversion of the aortic valves and the morbid sounds to which the lesion gives rise. He never attained to practice, declined honors and was defeated at an election for the assistant physiciancy at Guy's Hospital because, being a founder of the "Aborigines Society," it was said that no one should be elected to the staff of the hospital who "drove about with a North American Indian."

Sir James Y. Simpson (1811–1870) like Smellie and the Hunters, was a Scotsman and lived all his life in Edinburgh. Born in 1811 he was appointed Professor of Midwifery in the University of Edinburgh in 1840, receiving one vote more than his opponent, Dr. Evory Kennedy of Dublin. His greatest contribution was the introduction of chloroform as a general anesthetic. He died of angina pectoris on March 6, 1870, when many desired that he should be buried in Westminster Abbey though his family thought otherwise and his last resting place is in the Warriston Cemetery, Edinburgh. A largely attended meeting was held at Washington at the time of his death to express the feelings of his own profession in the United States at which Dr. Storer moved "that in Dr. Simpson American physicians recognize not merely an eminent and learned Scots practitioner, but a philanthropist whose love encircled the world; a discoverer who sought and found for suffering humanity in its sorest need a foretaste of the peace of heaven and a devoted disciple of the only true physician, our Saviour Jesus Christ." The memory of Sir James Simpson is so apt to be

connected entirely with his advocacy of chloroform to the exclusion of ether for producing anesthesia that this resolution of condolence called attention to his many other activities. He was not only a great accoucheur and teacher of midwifery but he was an archeologist of no mean repute and a doughty adversary, who usually appeared to get the better of an argument. At one period he came powerfully under the influence of religion and frequently addressed Evangelical assemblies of two thousand persons and wrote tracts and hymns.

Sir William Stokes (1804–1878) belonged to a family members of which for five generations occupied more or less prominent positions in the public life of Ireland. His father, Whitley Stokes, had preceded him as Professor of Medicine at Trinity College, Dublin, where his son was appointed Regius Professor of Physic in 1843. William Stokes was one of the first to introduce the use of the stethoscope into British medicine in 1825 and he soon proved himself a great bedside teacher. His greatest merit perhaps was his constant endeavor to teach and maintain a higher ethical standard in the medical profession. His axioms were:

> Never hold that you have any property in your patient; be tolerant with the sick in their restless desire to seek other advice; preserve your independence; eschew servility. As regards conduct in society, never allude to your success in practice. Be silent when quackery is discussed. Be tolerant when those who converse on medicine, while ignorant of its foundation, reject legitimate medicine. Never originate discussion on medical topics in conversation. As regards conduct towards the profession, consider first the patient, second your professional brother, lastly yourself. Be reticent, lest by a casual word upon the previous treatment of the case you inflict a stab in the dark on your brother's reputation.

He taught that before all things it was necessary to inculcate forgetfulness of self and would say that to the selfish man medicine is a means to an end and not as she should be a mistress, loved, worshipped and served for her own sake. A clinician of wide experience and accurate observatory power, he wrote a book on "Diseases of the Chest" that was of great importance in spreading the new method of physical diagnosis. His name is perserved for us in the terms "Cheyne-Stokes breathing," and "Stokes-Adams syndrome."

Finally there came Joseph, the first *Baron Lister* (1827–1912), one of the greatest of the Masters in Medicine. A humble-minded man of Quaker ancestry, he experienced like Harvey and Hunter before him the neglect and disapprobation of his contemporaries but lived to see the triumph of his principles and their adoption throughout the world. Educated in London, passing through an experimental period at the Infirmary in Glasgow, he triumphed at Edinburgh and ended in London. His aim was to abolish suppuration in wounds and to this end he devised a series of experiments somewhat randomly at first but soon guided and directed by the kindred researches of Pasteur in France. Lister showed that suppuration was not a necessary factor in the healing of wounds but was due to the presence of certain forms of microorganisms. If these microorganisms were excluded, as could easily be done, wounds healed painlessly and without danger. The proposition is now self-evident and thousands of lives have been saved by its general acceptance. It met however, with dislike and neglect, rather than with active opposition on the part of the

older hospital surgeons. Lister persisted with a quiet determination, produced the results he obtained, never lost his temper and had the satisfaction of seeing his methods adopted first in Denmark, then in Paris and in the end so universally that at every meeting of surgeons he was acclaimed almost as the god of healing. A general desire was expressed that he should be buried in Westminster Abbey, but in accordance with his own wish he was interred by the side of his wife in the cemetery at West Hampstead near London after a stately funeral service in the Abbey.

BIBLIOGRAPHY

1. Payne, J. F.: The Fitz-Patrick Lectures of 1893. English Medicine in the Anglo-Saxon Times. Oxford, 1904.
2. Moore, N.: The History of the Study of Medicine in the British Isles. Oxford, 1908. History of St. Bartholomew's Hospital. Lond., 1918, 2 vols.
3. Cholmeley, H. P.: John of Gaddesden and the Rosa Medicinae. Oxford, 1912.
4. Power, Sir D'Arcy: John of Arderne. Early English Text Society, Original Series No. 139. Lond., 1910. Life of William Harvey, 1897: A Short History of St. Bartholomew's Hospital (with Sir Holburt J. Waring 1923.
5. South: Craft of Surgery. Lond., 1886.
6. Young, S.: Annals of the Barber Surgeons Company. Lond., 1890.
7. Barrett: History of the Society of Apothecaries. Lond., 1905.
8. Bulloch: History of the University of Aberdeen. Lond., 1895.
9. Duncan: Memorials of the Faculty of Physicians and Surgeons of Glasgow. Glasgow, 1896.
10. Creswell: The Royal College of Surgeons of Edinburgh. Edinburgh, Privately Printed, 1926.
11. Comrie: History of Scottish Medicine. Lond., 1926.
12. Cameron: History of the Royal College of Surgeons of Ireland. Dublin, 1886.
13. Kirkpatrick: History of Dr. Steevens Hospital, Dublin. Dublin, 1924.
14. McCurrich: Treatment of the Sick Poor of this Country. 1929.
15. Parker, G.: Early History of Surgery in Great Britain. Lond., 1920.
16. Chaplin, A.: Medicine in England during the Reign of George III. Lond., 1919.
17. Thompson, C. J. S.: The Mystery and Art of the Apothecary. Lond., 1929.
18. Rivington, W.: The Medical Profession of the United Kingdom. Being the First Carmichael Prize Essay. Dublin, 1888. Pp. 1200. A full and painstaking

account of the Medical profession in England, Scotland and Ireland from the earliest times.
19. GLAISTER, J.: Dr. William Smellie. Glasgow, 1893.
20. MATHER, G. E. R.: Two great Scotsmen, the Brothers William and John Hunter. Glasgow, 1893.
21. PAGET, S.: John Hunter. Lond., 1897.
22. GORDON, H. L.: Sir James Young Simpson and Chloroform. Lond., 1897.
23. STOKES, SIR W.: William Stokes. Lond., 1898.
24. GODLEE, SIR R. J.: Life of Lord Lister. Lond., 1917.
25. Wood, S.: A rare manuscript of Chevalier Taylor, royal oculist, with notes on his life. *Brit. J. Ophthalmol.*, 14: 1930.

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